

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0666

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

CA 95814-5006

Eureka

95503

Sacramento

Phone Number: 707 4440746

Phone Number: 916-440-7955

System No:

Site/Project Name: Humboldt Bay NPP / December 2012

Billing Agency: RHB

Samples Received by Lab: 12/6/2012

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 12-0666-01

Sampling Point: Humboldt Bay

Sample ID: R 92353 Sample Type: Seawater Time Collected: 12/5/2012 08:10

K-40

EPA 901.1

324 +/- 17.7

62.7

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	MPLEANALYSIS (Radiochemical)
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804	Date Received Lab No. (Leave Blank) 12 - 6 - 12 12 - 0(e leb
510-620-2911	Bate & Time Sampled Serial Number
	12-5-12 02:10 R 92353
Collector Information Name: Dee Anderson	Reporting Information Name: らもve は50
Dept/Branch: いるらら Address: PG:E	Dept./Branch: RHB Address:
Telephone No.: ⁊๐๐ นุบุน อานูเ	elephone No/
Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Canal	Billing Agency DWFOB() SXRHB RWQCB() DTSC DWTPB DFDB DWR CDFG EMB DOther (Specify)
System No.:	G outer (openity)
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater ☐ Water Treatment Plant (
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorin	ne Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater Sludge (Semi-solid Samples)
Finishing:	Milk
C 200 C 200	₩ Wipes □ Biota (Type):
Net (M³)	Radon Canister
Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): 2617 - 9677	
Field Treatment: Preservatives added:	/ Ced/Frozen: Other:
Field Measurement:mR/hr	Radionuclide(s), if known:
Rush/Priority (should be prearranged and have supervisory	/ approval)
ANALYSIS REQUESTED (For questions, please call 510-620	-2911)
☐ Gross Alpha ☐ Gros	s Beta
	Beta (ISC) NORM (Gamma)
☐ Total Redium	
	on-14
Radium-228	이 마음 아내 그 사람들은 그는 그는 그는 그는 그는 그는 그는 그는 그는 그를 가지 않는 것이 되었다. 그는
Radon-222 Stron	ntium-89 90
Other (Specify);	
CHAIN OF CUSTODY	
Date Name (Print)	$\frac{12-5-12}{\text{Date}}$
Time Custody Received Organization	Time Custody Released
Date Name (Print)	Date
Time Custody Received Organization	Time Custody Released
Time Custody Received Organization	Signature Time Custody Released
ABORATORY REMARKS (Leave Blank)	
. Condition at Time of Receipt: $\qquad \qquad \subseteq 0.01$	
□ Acceptable □ Broken Container □ Holding Time Exceeded □ Sample Not Cooled	D Leaked in Transit D Improper Container 1 Insufficient Sample
Preservatives/Carriers: Added While Sampling Added in Laboratory	☐ Not Added ☐ Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0667

Collector:

System No:

Dee Anderson

RHB

95503

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CDPH - RHB, 1500 Capitol Av., MS 7610 CA

Phone Number: 707 4440746

Sacramento

95814-5006

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / December 2012

Eureka

Billing Agency: RHB

Samples Received by Lab: 12/6/2012

Parameter Method Result +/- CE MDA 95 Units Lab No: 12-0667-01 R 92347 Time Collected: 12/5/2012 08:10 Sample ID: Sampling Point: Effluent Canal Sample Type: Seawater Tritium EPA 906.0 -87.6 +/- 142 248 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR S	SAMPLE ANALYSIS (Radiochemical)
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164	Date Received Lab No. (Leave Blank)
Richmond, CA 94804	112-10-12 112-0667
510-620-2911	Date & Time Sampled Serial Number
	12-5-12 08:10 R 92347
Collector Information	Reporting Information
Name: Dea Anderson Dept./Branch: HBPP	Name: Steve Asu Dept./Branch: 0.18
Address: (PG:E	Address: RHB
Telephone No.: 707 QUU - 6746 Sample Information	Jelephone No.:
System Name / Facility:	Billing Agency
Sampling Point (s): Effluent Canal	DWFOB() SKRHB DRWQCB() DTSC DWTPB DFDB DWR DCDFG
Chatam No.	DWTPB U FDB DWR DCDFG DEMB DOther (Specify)
System No.:	
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater ☐ Water Treatment Plan	Surface Water
	nt (WTP)
☐ Air Filters Date/Time	Seawater Sludge (Semi-solid Samples)
Finishing:	Milk Soil/Sediment
Starting:	☐ Biota (Type):
Net (M³)	Radon Canister
☐ Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): ユロロー・ターング	
☐ Field Treatment: Preservatives added:	
☐ Field Measurement:mR/hr	Other:
☐ Rush/Priority (should be prearranged and have supervise	
ANALYSIS REQUESTED (For questions, please call 510-62	20-2911)
	ross Beta Gamma Scan
	otal Beta (LSC) NORM (Gamma)
	itium (³H) Isotopic Americium / Curium
7 	arbon-14
	dine-131
3 64 6	rontium-89, 90
	ckel-63 ☐ Iron-55
CHAIN OF CUSTODY	1
Date Name (Print)	12-5-12 Date
Time Custody Received Organization	
Time Custody Received Organization	Signature Time Custody Released
Date Name (Print)	
Time Custody Received Organization	
12-6-12 /	Signature Time Custody Released
Date Name (Print)	29 Mill. Date
Time Custody Received Organization	/Villona/fell-
	·····c custody (eleased
ABORATORY REMARKS (Leave Blank) $\angle 0.0$	OI MR/HR
Acceptable D Broken Container	
Holding Time Exceeded Sample Not Cooled	☐ Leaked in Transit ☐ Improper Container ☐ Insufficient Sample
. Preservatives/Carriers:	
Added While Sampling D Added in Laboratory	No Added



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0597

Collector:

System No:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

Task ID: 12-0597

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610 CA

Eureka

95503

Sacramento

95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / November 2012

Billing Agency: RHB

Samples Received by Lab: 11/8/2012

Parameter Result +/- CE Method MDA 95 Units Lab No: 12-0597-01 Sample ID: R 92276 Time Collected: 11/7/2012 08:35 Sampling Point: Effluent Canal Sample Type: Seawater Tritium EPA 906.0 -29.2 +/- 144 248 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUEST FOR SAMPL			
Sanitation and Radiation		Date Rece	ived	Lab No. (Leave Blank)
850 Marina Bay Parkway, (3164	11-8-	12 1/3	2-05:97
Richmond, CA 94804 510-620-2911		Date & Time S	ampled	Serial Number
510-020-2911		11-7-12 8	£35	R 92276
Collector Information		Reporting Informat	ion	
Name: Dee An	geizon	§ Name:	Steve HS	\mathbf{a}
Dept./Branch:	PEE	Tribupin Didition.	01000110	
Address:		Address:	RHS	
Telephone No.: 77-	444-0746	Telephone No.:	** C.	
		Billing Agency	· · · · · · · · · · · · · · · · · · ·	
System Name / Facility	18bb		RHB D RWQ	CB() DTSC
Sampling Point (s):	ERP/uent Canal	®□ DWTPB ` 1	☐ FDB ☐ DWR	
		© EMB (Other (Specify) _	
System No.:				<u></u> }
TYPE OF SAMPLE (Check				
☐ Drinking Water ☐ Raw	GroundwaterWater Treatment Plant (WTP	Surface Water No □ Distribution System		astewater pint of Use (POU)
	nlorinated / Chloraminated / Chlorine Di	The state of the s		• •
Treated (Circle One). Of		Tokide / Ozorialed / Fere	- Tidondated	7 Coagulated 7 pr 1 Adjusted
☐ Air Filters	Date/Time	Seawater Seawater	□ Sl	udge (Semi-solid Samples)
Finishing:		☐ Milk	□ Sc	oil/Sediment
Starting:		Ü Wipes	Q Bi	ota (Type):
Net (M ³)		Radon Canister	□ Ot	
☐ Air Charcoal Cartridge		* 5		
An Onarcoal Cartiage				
☐ Field Measurement: ☐ Rush/Priority (should be	mR/hr prearranged and have supervisory ap	Radionuclide(s), proval)	if known:	
ANALYSIS REQUESTED (For questions, please call 510-620-291	1).		
☐ Gross Alpha	☐ Gross Be	eta:	☐ Gamma Scan	
☐ Total Uranium	☐ Total Bet	ta (LSC)	☐ NORM (Gamma)
☐ Total Radium	🖳 Tritium (³	- 7	☐ Isotopic Americi	
☐ Radium-226	☐ Carbon-1		☐ Isotopic Plutonii	
Radium-228	☐ lodine-13	1.	☐ Isotopic Thoriun	
Radon-222	☐ Strontium	- 1. D	☐ Isotopic Uraniur	
Other (Specify);	☐ Nickel-63	74	☐ Iron-55	
CHAIN OF CUSTODY			- NOTI-OU	
CHAIN OF CUSTOUT				ルラン
Date	Name (Print)	^		Date
		2500		_930_
Time Custody Received	Organization	Signature		Time Custody Released
Date	Name (Print)	13)1.1.2.	· · · · · · · · · · · · · · · · · · ·	Date
				100 mg/s
Time Custody Received	Organization	Signature		Time Custody Released
B. Date #- 4-12	Nåme (Print)			Date
				54.0
<u></u>	DWR13	C - C - C - C - C - C - C - C - C - C -		The first control of the control of
Time Custody Received	Organization DWRLB	Signature		Time Custody Released
Time Custody Received				Time Custody Released
Time Custody Received	(Leave Blank) \angle A	Signature OI MR/HR		Time Custody Released
ABORATORY REMARKS Condition at Time of Rec	(Leave Blank)	D. MR/HR D. Leaked in Transit		
Time Custody Received ABORATORY REMARKS Condition at Time of Rec	(Leave Blank)	DI MR/HR		



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0596

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

Eureka

95503

Sacramento

95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / November 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 11/8/2012

Parameter Method Result +/- CE **MDA** 95 Units Lab No: 12-0596-01 Time Collected: 11/7/2012 08:35 Sample ID: R 92275 Sampling Point: Effluent Canal Sample Type: Seawater K-40 EPA 901.1 325 +/- 21.0 80.4 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUES	ST FOR SAMPL	-L MIML 1313 (Rd		
Sanitation and Radiation		h	Date R	eceived	Lab No. (Leave Blank)
850 Marina Bay Parkway, Richmond, CA 94804	, G164		11-9-	17	12-0591
510-620-2911		أستنسس بهي		né Sampled	Serial Number
510 OLO 2011			11-7-12	0835	R 92275
Collector Information >			Reporting Inform		I N SEETS
Name: Deg A	uderson 16th		Name:	steve	HSU
Dept./Branch: ABDT Address:	PGTE		Dept./Branch:		11 = 0(
Address.			Address:	RHB	
Telephone No.: 707	2-444-074	6	Telephone No.:		
Sample Information			Billing Agency		
System Name / Facility: Sampling Point (s):	HBPP		DWFOB()	RHB 🗅	RWQCB() DTSC
campang Four (s).	Effluent	C-15-1	☐ DWTPB	☐ FDB ☐	DWR CDFG
System No.:	rashiter	(AMP)	→ □ EMB	Other (Spe	ecify)
YPE OF SAMPLE (Chec	k all applicable boxes)				
Drinking Water	☐ Groundwate	er Er	☐ Surface Water		☐ Wastewater
Raw	Water Treat	ment Plant (WTP	Distribution Sv	stem	Point of Use (POU)
I Treated (circle one): C	hlorinated / Chloramina	ated / Chlorine Di	oxide / Ozonated / P	eroxizone / Fluor	ridated / Coagulated / pH Adjuste
Air Filters	Date/		Seawater	····	
Finishing:		**************************************	Milk		☐ Sludge (Semi-solid Samples)
Starting:		· · · · · · · · · · · · · · · · · · ·	Wipes		□ Soil/Sediment
Net (M³)					☐ Biota (Type):
Air Charcoal Cartridge		· .	Radon Caniste	r	Other:
i vili Orialicoal Caltituge					
Field Treatment: Pres	And the second s	8337 HNOS	iced/Frozen:		her:
OMMENTS: (Cautions, e Field Treatment: Pres Field Measurement: Rush/Priority (should be	servatives added:	HNO5 mR/hr 5	A Radionuclide(s		her:
Field Treatment: Pres Field Measurement:	servatives added:	MR/hr se supervisory app	☐ Radionuclide(s roval)		her:
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (servatives added:	mR/hr se supervisory app	☐ Radionuclide(s roval) 1)), if known:	
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (servatives added:	mR/hr supervisory app call 510-620-291	☐ Radionuclide(s proval) 1) ta), if known:	can
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium	servatives added:	mR/hr supervisory app call 510-620-291 Gross Bet	□ Radionuclide(s iroval) 1) ta a (LSC)	(), if known:	can amma)
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Gross Alpha Total Uranium Total Radium	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta	☐ Radionuclide(s iroval) 1) ta a (LSC) -f)-	Gamma Solution NORM (Ga	can amma) mericium / Curium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3)	TRadionuclide(s proval) 1) ta a (LSC) -1) -	Gamma Solution NORM (Galution Isotopic Ar	can amma) nericium / Curium utonium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3h Carbon-14	TRadionuclide(s proval) 1) ta a (LSC) -1) -	Gamma Solution Solut	can amma) nericium / Curium utonium iorium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	TRadionuclide(s eroval) 1) ta a (LSC) -1)- 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) nericium / Curium utonium iorium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3h Carbon-14	TRadionuclide(s eroval) 1) ta a (LSC) -1)- 4 1 -89, 90	Gamma Solution Solut	can amma) nericium / Curium utonium iorium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	TRadionuclide(s eroval) 1) ta a (LSC) -1)- 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	TRadionuclide(s eroval) 1) ta a (LSC) -1)- 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) nericium / Curium utonium iorium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	servatives added:	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	Radionuclide(s proval) 1) ta a (LSC) -1) 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium anium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); Date Time Custody Received	Name (Print) Organization	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	TRadionuclide(s eroval) 1) ta a (LSC) -1)- 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium anium anium Date Time Custody Released
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); Date Time Custody Received Date	Name (Print) Name (Print) Name (Print)	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	Radionuclide(s iroval) 1) ta a (LSC) -1) 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium anium
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	Name (Print) Organization	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	Radionuclide(s proval) 1) ta a (LSC) -1) 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium anium Date Time Custody Released
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); HAIN OF CUSTODY Date Time Custody Received	Name (Print) Organization Servatives added: Properties and have a servative and have a serv	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	Radionuclide(s iroval) 1) ta a (LSC) -1) 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium norium anium Time Custody Released Date Time Custody Released
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	Name (Print) Organization Name (Print) Organization Name (Print)	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	Radionuclide(s iroval) 1) ta a (LSC) -1) 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium anium Date Time Custody Released
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); IAIN OF CUSTODY Date Time Custody Received Date Time Custody Received	Name (Print) Organization Servatives added: Properties and have a servative and have a serv	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3) Carbon-14 lodine-13	Radionuclide(s iroval) 1) ta a (LSC) -1) 4 1 -89, 90	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium ranium Date Time Custody Released Date Time Custody Released
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); IAIN OF CUSTODY Date Time Custody Received Date Time Custody Received Date Time Custody Received Time Custody Received Time Custody Received	Name (Print) Organization Name (Print) Organization Organization Organization	mR/hr e supervisory app call 510-620-291 Gross Bet Total Beta Carbon-1 Iddine-13 Strontium Nickel-63	Radionuclide(soroval) 1) ta a (LSC)	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium anium Time Custody Released Date Time Custody Released
Field Treatment: Pres Field Measurement: _ Rush/Priority (should be NALYSIS REQUESTED (Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	Name (Print) Organization Name (Print) Organization Name (Print) Organization Variety (Print) Organization	mR/hr supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3h Carbon-14 lodine-13: Nickel-63	Radionuclide(sorroval) 1) ta a (LSC)	Gamma Solution NORM (Galustopic Arlustopic Plusotopic The Isotopic Ur	can amma) mericium / Curium utonium iorium ranium Date Time Custody Released Date Time Custody Released
Field Treatment: Pres Field Measurement: Rush/Priority (should be NALYSIS REQUESTED (Grøss Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); IAIN OF CUSTODY Date Time Custody Received Date Time Custody Received Date Time Custody Received BORATORY REMARKS	Name (Print) Organization (Leave Blank) oipt:	mR/hr supervisory app call 510-620-291 Gross Bet Total Beta Tritium (3h Carbon-14 lodine-13: Nickel-63	Radionuclide(soroval) 1) ta a (LSC)	Gamma Sella NORM (Galla Isotopic Arlastopic Philastopic Urlastopic	can amma) mericium / Curium utonium iorium ranium Date Time Custody Released Date Time Custody Released



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0515

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

Sacramento

CDPH - RHB, 1500 Capitol Av., MS 7610

Eureka 95503 Phone Number: 707 4440746

CA 95814-5006

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / October 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 10/11/2012

Parameter Method Result +/- CE MDA 95 Units Lab No: 12-0515-01 R 92272 Sample ID: Time Collected: 10/10/2012 10:40 Sampling Point: Effluent Canal Sample Type: Seawater K-40 EPA 901.1 339 +/- 17.9 62.3 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

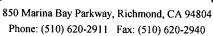
⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUESTFOR SAMPLE	
Sanitation and Radiation Laboratories Branch	Date Received Lab No. (Leave Blank)
850 Marina Bay Parkway, G164	10-11-12 12-15-1
Richmond, CA 94804 510-620-2911	Date & Time Sampled Serial Number
	10-10-12 1040 R 92272
Collector Information	Reporting Information
Name: Dee Anderson	Name: Dept./Branch: Steve HSU
Dept./Branch:	
PG+I	Address: RHB
Telephone No.: 707-444-0746	Telephone No.:
Sample Information URPA	Billing Agency
System Name / Facility: FOOL (ant Ca Ma)	D DWFOB() SHB D RWQCB() D DTSC
compand our los Ett. I was , when I	DOWTPB DEFORM DOWN CDFG DEMB DOTTO OTHER CONTROL OF CONTROL OTHER CONTRO
System No.:	Carol (Openia)
TYPE OF SAMPLE (Check all applicable boxes)	
	Surface Water Wastewater
Raw Water Treatment Plant (WTP)	
Treated (circle one): Chlorinated / Chloraminated / Chlorine Diox	de / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater Sludge (Semi-solid Samples)
Finishing:	Milk
' Starting:	☐ Wipes ☐ Biota (Type):
Net (M ³)	Radon Canister Other:
	Radon Canister Gruei.
☐ Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): 1012-7531	
	loed/Frozen: Other:
	Radionuclide(s), if known:
☐ Rush/Priority (should be prearranged and have supervisory appro	OM CONTRACTOR CONTRACT
ANALYSIS REQUESTED (For questions, please call 510-620-2911)	
그는 해가 되었다. 그렇게 되었는데 가게 되었다. 그는 그렇게 하는 것 같은 것이 되었다.	
☐ Gross Alpha ☐ Gross Beta	
☐ Total Uranium ☐ Total Beta (☐ Total Radium ☐ Tritium (³H)	
— · · · · · · · · · · · · · · · · · · ·	Market Control of the
☐ Radium-226 ☐ Carbon-14	□ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131	
□ Radon-222 □ Strontium-8	
Other (Specify); Nickel-63	☐ Iron-55
CHAIN OF CUSTODY	
1. Date Name (Print)	Date
Time Custody Received Organization	Signature Time Custody Released
2.	
Date Name (Print)	Date
Time Custody Received Organization	Signature Time Custody Released
3. 10-11-17 Name (Print)	Date
10130 DWD1 B	1) utoma 1/1 al
Time Custody Received Organization	Signature Time Custody Released
LABORATORY REMARKS (Leave Blank) 4 0 - 01	UR/HR
A. Condition at Time of Receipt:	
Acceptable	U Leaked in Transit U Improper Container U Insufficient Sample
B. Preservatives/Carriers:	



Drinking Water and Radiation Laboratory Branch





FINAL Analysis Results Report for Task ID. 12-0516

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon Eureka

95503

CDPH - RHB, 1500 Capitol Av., MS 7610

CA 95814-5006

CA

Sacramento

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / October 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 10/11/2012

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 12-0516-01

Sampling Point: Effluent Canal

Sample ID:

Sample Type: Seawater

R 92261

Time Collected: 10/10/2012 10:40

261

pCi/L

Tritium

EPA 906.0

-182 +/- 148

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Sey Marina Beay Partiveay, G164 Richarond, CA, 94804 Serial Mumber Stock 2011 Dot 6, Time Sampled Serial Mumber	REQUEST I	FOR SAMPLE	NALYSIS (Radioc		
Richmond, CA 94804 To Gollector Information Name: Deep A Cal S ON Deep A Cal					Lab No. (Leave Blank)
Collector Information Coll		4	Manager and the second of the		
Collector Information Name: Na			Date & Time Sa	ampled A	Serial Number
Collector Information Name:					R 92261
Dept-lands Dep	Collector Information		Penorting Information	on , ,	
Dept-lands Dep	Name: Dee Anderson	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	vame: 5	teve H	2 M
Telephone No. Sample Information Sample Information Sample Information System Name / Fability: Sampling Point (s): System No. TYPE OF SAMPLE (Check all applicable boxes) Dinking Water System No. Treated (circle one): Chlorinated / Choraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fikoridated / Coagulated / pH Adjusted Air Filters Date/Time Seawater Starting: Star	Dept./Branch: AR DO		Jept./ Drancis.		
Sample Information System Name (Fability: HSPP. DWPGB SARHB DWR CDFG Sampling Point (s): Comment DWPGB DWR CDFG System No.: DWPGB DWR CDFG DWRPB Check all applicable boxes DWRPB Check all applicable boxes Dirinking Water Wastewater Point of Use (POU) Treated (citcle one): Chlorinated / Chlorinatinated / Chlorinated / Chlorinatinated / Chlorinatinated / Chlorinated / Peroxizone / Fluoridated / Cogquitated / phi Adjusted Air Filters Date/Time Seawater Sludge (Semi-sofld Samples) Milk	Address:		Aggress.	K HZ	
Sample Information System Name (Fability: HSPP. DWPGB SARHB DWR CDFG Sampling Point (s): Comment DWPGB DWR CDFG System No.: DWPGB DWR CDFG DWRPB Check all applicable boxes DWRPB Check all applicable boxes Dirinking Water Wastewater Point of Use (POU) Treated (citcle one): Chlorinated / Chlorinatinated / Chlorinated / Chlorinatinated / Chlorinatinated / Chlorinated / Peroxizone / Fluoridated / Cogquitated / phi Adjusted Air Filters Date/Time Seawater Sludge (Semi-sofld Samples) Milk	Telephone No.: 207-444-074	16	elephone No.:		
System Name / Facility: FBP DWFO8 () SARHB RWOCB () DTSC Sampling Point (s): CDFG DWFD8	Sample Information				
Sampling Point (s): CFG Cohen	System Name / Facility: HBPP	*	DWFOB()		
System No. TYPE OF SAMPLE (Check all applicable boxes) Christing Water Groundwater Wastewater Studge (Semi-solito Syndron of Wastewater	Sampling Point (s):	- \ [□ CDFG
TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Groundwater Groundwa	Gretom No.	ana 1] EMB L	J Other (Specify)	
Drinking Water Groundwater Raw Water Treatment Plant (WTP) Surface Water Point of Use (POU) Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted Air Filters Date/Time Seawater Sludge (Semi-solld Samples) Sidring: Milk Soll/Sediment Sidring: Wipes Biota (Type): Net (M²) Radon Canister Other: Other: Air Charcoal Cartridge COMMENTS: (Cautions, etc.): 2012 75 3 Radon Canister Other: DRAdionuclide(s), if known: PRatry Preservatives added: mR/hr DRAdionuclide(s), if known: PRatry Preservatives Preservat					
Raw Water Treatment Plant (WTP) Distribution System Point of Use (POU)		į.	Curfoce Water	∏ Wa	atawatar
Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted Air Filters	☐ Raw ☐ Water Treatme				
Air Filters Date/Time Seawater Sludge (Semi-solid Samples) Finishing: Starting: Milk		445			
Finishing: Starting: Starting: Net (M*) Air Charcoal Cartridge COMMENTS: (Cautions, etc.): Field Treatment: Preservatives added: Field Measurement: Radionuclide(s), if known: Radionu			<u> </u>		
Starting:	Air Filters Date/ I in				
Net (M*) Air Charcoal Cartridge COMMENTS: (Cautions, etc.):	Finishing:	<u> </u>) Milk 7	☐ Soil	/Sediment
Air Charcoal Cartridge COMMENTS: (Cautions, etc.):	Starting:) Wipes	☐ Biof	ta (Type):
Air Charcoal Cartridge COMMENTS: (Cautions, etc.):	Net (M³)		Radon Canister	☐ Oth	er:
Field Treatment: Preservatives added: Codiffrozen: Other: Preservatives added: Codiffrozen: Other: Preservatives added: Codiffrozen: Other:	☐ Air Charcoal Cartridge		a Marion Marion		
Field Treatment: Preservatives added:				a da antara da antara	
Field Measurement:	그리는 그는 그는 그들은 그리는 그리는 대학생은 그리고 하는 때 하고 아들이 한다면 이 사람이 되었다면서 그렇게 되었다면서 그렇게 되었다면서 그렇게 되었다.	551 78)		Carried Control of the Control of th
Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta NoRM (Gamma) Total Beta (LSC) NORM (Gamma) Sotopic Americium / Curium Radium-226 Radium-228 Grabon-14 Radium-228 Radon-222 Strontium-89, 90 Isotopic Thorium Nickel-63 CHAIN OF CUSTODY Time Custody Received Time Custody		4.77			
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Alpha Gross Beta Gross Beta NoRM (Gamma) Stritium (³H) Stotopic Americium / Curium Stotopic Plutonium Stotopic Plutonium Stotopic Plutonium Stotopic Thorium Stotopic Uranium Stotopic Thorium Stotopic Thorium Stotopic Thorium Stotopic Thorium Stotopic Uranium Stotopic Thorium Stotopic Uranium Stotopic Thorium Stotopic Tron-55 CHAIN OF CUSTODY Time Custody Released Time Custody Released Time Custody Released A Date Name (Print) Name (Print) Name (Print) Signature Time Custody Released LABORATORY REMARKS (Leave Blank) A Condition at Time of Receipt: Stotopic Thorium Signature Time Custody Released Laboratory Remarks (Leave Blank) Lasked in Transit Signature Improper Container Insufficient Sample B Preservatives/Carriers:		- 15 B		f known:	
Gross Alpha Gross Alpha Gross Beta Gross Gross Beta Gross Gr	Rush/Priority (should be prearranged and have s	upervisory approv	val)		
□ Total Uranium □ Total Beta (LSC) □ NORM (Gamma) □ Total Radium □ Radium-226 □ Carbon-14 □ Isotopic Americium / Curium □ Radium-228 □ Isotopic Plutonium □	ANALYSIS REQUESTED (For questions, please cal	II 510-620-2911)	A Company		
□ Total Uranium □ Total Beta (LSC) □ NORM (Gamma) □ Total Radium □ Radium-226 □ Carbon-14 □ Isotopic Americium / Curium □ Radium-228 □ Isotopic Plutonium □ Isotopic Uranium □	☐ Gross Alpha	☐ Gross Beta	Ţ	☐ Gamma Scan	
□ Total Radium □ Radium-226 □ Carbon-14 □ Isotopic Americium / Curium □ Radium-228 □ Iodine-131 □ Isotopic Thorium □ Radium-228 □ Strontium-89, 90 □ Isotopic Uranium □ Other (Specify); □ Nickel-63 □ Iron-55 CHAIN OF CUSTODY 1 □ Date □ Name (Print) □ Date □ Name (Print) □ Time Custody Received □ Organization □ Signature □ Time Custody Received □ Organization □ Signature □ Date □ Name (Print) □ Date □ Date □ Name (Print) □ Date □ Da		☐ Total Beta (Î			
Radium-226 Radium-228 Radon-222 Strontium-89, 90 Isotopic Plutonium Is		7 _ 7 _ 7		_	
□ Radium-228 □ Radon-222 □ Strontium-89, 90 □ Isotopic Thorium □ Isotopic Uranium □ Isot		7	to a comment of the c		
□ Radon-222 □ Strontium-89, 90 □ Isotopic Uranium □ Other (Specify); □ Nickel-63 □ Iron-55 CHAIN OF CUSTODY 1 Date Name (Print) □ Date Time Custody Riceived Organization □ Date □ Date Name (Print) □ Date		2			
CHAIN OF CUSTODY Date Name (Print) Time Custody Riceived Organization Date Name (Print) Time Custody Received Organization Time Custody Received Organization Signature Time Custody Received Organization Signature Time Custody Received Organization Signature Time Custody Released Date Time Custody Received Organization Signature Time Custody Released Date Time Custody Released					
CHAIN OF CUSTODY Date Name (Print) Date Time Custody Received Organization Time Custody Received Organization Date Name (Print) Time Custody Received Organization Signature Time Custody Released Name (Print) Date N		· ·			
Date Time Custody Received Date Name (Print) Date Time Custody Received Time Custody Received Time Custody Received Time Custody Received Date Name (Print) Date Time Custody Received Date Time Custody Released Date Name (Print) Date Time Custody Released		U INICKEI-US		i iion-oo	
Date Time Custody Received Date Name (Print) Time Custody Received Name (Print) Time Custody Received Organization Signature Time Custody Released Name (Print) Date Name (Print) Date Name (Print) Date Name (Print) Date Time Custody Released Name (Print) Date Time Custody Released Name (Print) Date Time Custody Released					100 100 10
Time Custody Received Organization Date Name (Print) Time Custody Received Organization Time Custody Received Organization Time Custody Received Organization Name (Print) Date Time Custody Released Time Custody Released Time Custody Released Date Time Custody Released Time Custody Released Date Time Custody Released Date Time Custody Released Time Custody Released Date Time Custody Released	Date Name (Print)	*	『ヘーラート		
2. Date Name (Print) Time Custody Received 3. Date Signature Signature Time Custody Released Date Name (Print) Date Name (Print) Time Custody Released Signature Date Time Custody Released LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: Acceptable Broken Container Leaked in Transit Improper Container Insufficient Sample B. Preservatives/Carriers:			1060		<u>_11/5</u>
Date Time Custody Received Organization Name (Print) Date Name (Print) Name (Print) Date Name (Print) Name (Print) Name (Print) Date Time Custody Released Date Time Custody Released Time Custody Released Date Time Custody Released Time Custody Released LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: Acceptable Acceptable Holding Time Exceeded Broken Container Holding Time Exceeded Name (Print) Date Time Custody Released Time Custody Released Time Custody Released			Septure		Time Constody Released
Time Custody Received 3.		-			Date
3. Date Name (Print) Date Date			<u> </u>		
Time Custody Received Organization Date Discourage Date D			Signature		Time Custody Released
Time Custody Received Organization Signature Time Custody Released LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: Acceptable Holding Time Exceeded Broken Container Holding Time Exceeded Time Custody Released Leaked in Transit Improper Container Insufficient Sample B. Preservatives/Carriers:					Date
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: A. Condition at Time of Receipt: Acceptable Broken Container Leaked in Transit Improper Container Insufficient Sample B. Preservatives/Carriers:	10:30 Duif	<u> </u>	/ Vulory	o Wal	u <u>lah dan basar bas</u> i Mi
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container ☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample ☐ Insufficient Sample ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Time Custody Received Organization		Signature	may.	Time Custody Released
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container ☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample ☐ Insufficient Sample ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	LARGRATORY REMARKS (Leave Blank)	7-0%	1110/110		
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample ☐	A. Condition at Time of Receipt:				
B. Preservatives/Carriers:					Improper Container
	U Holding I ime Exceeded Light Sample No	t Coolea	3 Insumcient Sampi		
			T NEW ANDREA		i i i i i i i i i i i i i i i i i i i



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0441

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

95503

Sacramento

95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / September 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 9/10/2012

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 12-0441-01

Sample Type: Seawater

Sample ID:

Time Collected: 9/5/2012

Sampling Point: Effluent Canal

K-40

EPA 901.1

R 92152

287 +/- 22.6

88.7

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUEST FOR SAMPLE	TO THE PERSON NAMED IN COLUMN TO THE		
Sanitation and Radiation Laborator 850 Marina Bay Parkway, G164	ries Branch	Date Received		Lab No. (Leave Blank)
Richmond, CA 94804		Date & Time Sample		Serial Number
510-620-2911		9 5 12/0905		R 92152
Collector Information		Reporting Information		
Name: DEF ANDERSON		Name: STE	EVE HSU	
Dept./Branch: HEPP			RHB	
Address: PG & E		Address.		
Telephone No.: (707) 444.0	7486	Telephone No.:	المنا بريهند المالية	
Sample Information HBPP		Billing Agency		
System Name / Facility:	ENT CANAL	D DWFOB() X RI		B() DTSC >-
2011 build 1 2 11 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1			ther (Specify)	UI CUFG
System No.:	· · · · · · · · · · · · · · · · · · ·	7-		
YPE OF SAMPLE (Check all applica	able boxes)			
] Raw	Water Treatment Plant (WTP)	·	🦸 🖵 Poir	stewater nt of Use (POU)
Treated (circle one): Chlorinated /	Chloraminated / Chlorine Diox	de / Ozonated / Peroxizor	ne / ၛၟႄႝuoridated /	Coagulated / pH Adjusted
Air Filters	Date/Time	Seawater	□ Sluc	dge (Semi-Samples)
Finishing:		Milk		/Sediment
Starting:		Wipes	The state of the s	a (Type)
Net (M ³)		26 T		
Air Charcoal Cartridge		Radon Canister	☐ Oth	ər:
Alf Charcoar Carthuge				
OMMENTS: (Cautions, etc.): 2	012.6941			
Field Treatment: Preservatives	added: HN03 /	ced/Frozen:		
Field Measurement:	mR/hr	🗓 Radionuclide(s), if kno	own:	
Rush/Priority (should be prearrang		MG 2 2 3		
NALYSIS REQUESTED (For question	ons, please call 510-620-2911)		معتبئ ترميد	***
) Gross Alpha	☐ Gross Beta	j ≥ . G	Samma Scan	
Total Uranian	☐ Total Beta	8	IORM (Gamma)	
Total Radiam	Tritium (³ H	A 28' 5	sotopic Americiur	m / Curium
Radium-226	☐ Carbon-14	A ·	sotopic Plutoniun	
Radium-228	☐ lodine-131		sotopie Thorium	
L Radon-222	☐ Strontium-		sotopic Uranium	
Other (Specify);	Nickel-63		on-55	
HAIN OF CUSTODY		*	A	
Date Name (Pr		0000		9-5-7Z Date
Time Custody Received Organizat	ion	Signature		Time Custody Released
Date Name (Pri	int)			Date
Time Custody Received Organizati	UQ	Signature		Time Custody Released
Date Name (Pri	int)	19-1-14 (v/-	Date
Time Custody Received Organizati	ion DUKCD	Signature	<u>u </u>	Time Custody Released
ABORATORY REMARKS (Leave Bl	ank)2. C 0.51/	WE HE	. / .	
	Broken Container Sample Not Cooled	Leaked in Transit Insufficient Sample		Improper Container
. Preservatives/Carriers:	Added in Laboratory	□ Not Added		Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0442

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610 CA

Phone Number: 707 4440746

Sacramento

95814-5006

Phone Number: 916-440-7955

System No:

Site/Project Name: Humboldt Bay NPP / September 2012

95503

Billing Agency: RHB

Samples Received by Lab: 9/10/2012

Parameter Method Result +/- CE **MDA** 95 Units Lab No: 12-0442-01 Sample ID: R 92144 Time Collected: 9/5/2012 09:05 Sampling Point: Effluent Canal Sample Type: Seawater Tritium EPA 906.0 -145 +/- 149 261 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Lab 803 (11/07)

REQUEST FOR SAMPLE	
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804	Lab No. (Leave Blank) 12-0442
510-620-2911	Date Time Sampled Serial Number
Collector Information	95 12/0905 R 92144
Name: DEE AUDERSON Dept./Branch: HBPP Address: PG & E	Reporting Information Name: Dept./Branch: STEVE HSU Address: マーバろ
Telephone No.: (70-7)444 0746	Telephone No.:
Sample Information System Name / Facility: HBPP Sampling Point (s): EFF LUENT (ANAL System No.:	Billing Agency DWFOB() SKRHB RWQCB() DTSC DWTPB DFDB DWR DCDFG DEMB Other (Specify)
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater ☐ Raw ☐ Water Treatment Plant (WTP)	Surface Water
Finishing:	Seawater Sludge (Semi-salid Samples) Milk Soil/Sediment
Net (M³)	- Clott (1) po).
Air Charcoal Cartridge	🗖 Radon Cànister
All Charcoar Cardinge	
COMMENTS: (Cautions, etc.): 2012-644	
☐ Field Treatment: Preservatives added:	ced/Frozen: Other:
☐ Field Measurement:mR/hr	Radionuclide(s), if known:
Rush/Priority (should be prearranged and have supervisory appro	ival)
ANALYSIS REQUESTED (For questions, please call 510-620-2911)	
☐ Gross Alpha ☐ Gross Beta	
☐ Total Uranium ☐ Total Beta (
☐ Total Radium) ☐ Tritium (³H)	
☐ Radium-226 ☐ Carbon-14	
☐ Radium-228	
☐ Radon-222 ☐ Strontium-8	
Other (Specify); Nickel-63	☐ Iron-55
CHAIN OF CUSTODY	
1. Date Name (Print)	9512
Time Custody Received Option 2	RECO 0930
	Fignature Time Custody Released
Date Name (Print)	Date
3. <u>- 9-10-79</u>	Signature Time Custody Released
Date 11:30 F Name (Print) DWRIB	Dutono Wells Date
Time Custody Received Organization	Signature Time Custody Released
ABORATORY REMARKS (Leave Blank) C 0.01 N	OR/HR
Condition at time of Receipt: Acceptable Broken Container	☐ Leaked in Transit ☐ Improper Container ☐ Insufficient Sample
3. Preservatives/Carriers:	



State of California - Health and Human Services Agency

California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0316

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

Eureka

95503

Sacramento CA 95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / August 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 8/2/2012

Task ID: 12-0316

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0316-01	Sample ID: R 92054 Sample Type: Seawater	Time Collected: 8/1/2012	08:30 Sampling Poir	at: Effluent Canal
K-40	EPA 901.1	347 +/- 17.8	60.6	pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	JEST FOR SAMPLE			
Sanitation and Radiation Laboratories Bra 850 Marina Bay Parkway, G164 Richmonil, CA 94804	nch	Date Re 8-2-	12	Lab No. (Leave Blank) 12 - 03/6
510-620-2911		Date & Time	,	Serial Number
		8-1-15	0830	R 92054
Collector Information Name: Dee Anderson Dept./Branch: HBPP PC+E Address:		Reporting Inform Name: Dept./Branch: Address:	ation zue HSY RHB	
Telephone No.: 707-444-0	JU1_	Telephone No.:		
Sample Information System Name / Facility: HBPP Sampling Point (s): System No.:		Billing Agency DWFOB() DWTPB BMB	RHB RW FDB DW Other (Specify)	
TYPE OF SAMPLE (Check all applicable box				
☐ Drinking Water ☐ Groundw☐ Raw ☐ Water Ti	vater reatment Plant (WTP)	Surface Water Distribution Sys	tem 🛄 (Wastewater Point of Use (POU)
☐ Treated (electe one): Chlorinated / Chlorar	ninated / Chlorine Diox	dde / Ozonated / Pe	roxizone / Fluoridat	ed / Coagulated / pH Adjusted
☐ Air Filters Di	ate/Time	Seawater Milk		Sludge (Semi-solid Samples) Soil/Sediment
Starting:		Wipes	0 1	Biota (Type):
Net (M ³)		Radon Canister		Other:
☐ Air Charcoal Cartridge				
COMMENTS: (Cautions, etc.): 2013 Field Treatment: Preservatives added: Field Measurement: Rush/Priority (should be prearranged and by	<u> </u>	ced/Frozen: Radionuclide(s)	Other:	
ANALYSIS REQUESTED (For questions, plea	ise call 510-620-2911)			
Gross Alpha	☐ Gross Beta		Gamma Scan	
Total Uranium	☐ Total Beta	(SC)	☐ NORM (Gamm	na)
☐ Total Radium	☐ Tritium (³ H)	1	☐ Isotopic Ameri	The state of the s
Radium-226	☐ Carbon-14		☐ Isotopic Plutor	ium
Radium-228	☐ lodine-131		☐ Isotopic Thoriu	m
Radon-222	☐ Strontium-8		Isotopic Uraniu	ım
Other (Specify);	. ☐ Nickel-63	•	☐ Iron-55	
CHAIN OF CUSTODY				
Date Name (Print)				Date 1-12
Time Custody Received Organization		Signature	2	Time Custody Released
Date Name (Print)				Date
Time Custody Received Organization Date Name (Print)	<u> </u>	Signature		Time Custody Released
11:30	111818	19.7	7	Date
Time Custody Received Organization		Signature	or will all	Time Custody Released
	en Container	UR/IHR D Leaked in Transi D Insufficient Samp		Improper Container
	d in Laboratory			3 Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0317

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

95503 CA

Sacramento

CDPH - RHB, 1500 Capitol Av., MS 7610 95814-5006 CA

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / August 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 8/2/2012

Task ID: 12-0317

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0317-01	Sample ID: R 92056 Sample Type: Seawater	Time Collected: 8/1/2012	08:30 Sampling l	Point: Effluent Canal
Tritium	EPA 906.0	-31.4 +/- 152.	3 262.0	pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Canitation and Dudintin Lab	REQUEST FOR SAMP	LE ANALYSIS (Radiochemical)	
Sanitation and Radiation Lab 850 Marina Bay Parkway, G16		Date Received	Lab No. (Leave Blank)
Richmond, CA 94804		1 8-4-12	12-0317
510-620-2911		Date & Time Sampled	Serial Number
		8-1-12 0830	R 92056
Collector Information		Reporting Information	
Name: Dee Auder: Dept./Branch: HEPD Ac	3QN	Name: Steve HS	(1)
Address:	>7E	Dept./Branch: RHB	4
Telephone No.* 707	44-0746	elephone No.:	
Sample Information System Name / Facility: +B	Po	Billing Agency	
Sampling Point (s):	PI	DWFOB() RHB RWC	
CA.	fluent canal	D DWTPB D FDB D DWR D EMB D Other (Specify)	
System No.:		EMB Other (Specify)	 /
TYPE OF SAMPLE (Check all a	ipplicable boxes)		
☐ Drinking Water	☐ Groundwater	D Surface Water □ W	/astewater
☐ Raw	Water Treatment Plant (WT)	P) Distribution System D P	oint of Use (POLI)
☐ Treated (circle one): Chlorin	ated / Chloraminated / Chlorine D	oxide / Ozonated / Peroxizone / Fluoridated	d / Coagulated / pH Adjusted
☐ Air Filters	Date/Time		
			udge (Semi-solid Samples)
			oil/Sediment
Starting:		☑ Wipes □ Bi	ota (Type):
Net (M ³)			her:
☐ Air Charcoal Cartridge			
COMMENTS: (Cautions etc.):	2012-5600		
Field Treatment: Preserva			
Field Measurement:		Radionuclide(s), if known:	
	nrranged and have supervisory ap	we de la constant de	
ANALYSIS REQUESTED (For q	uestions, please call 510-620-29	1)	
Gross Alpha	☐ Gross B	ta 🔲 Gamma Scan	
☐ Total Uranium	☐ Total Be		
☐ Total Radium	🙀 Tritium (
☐ Radium-226	☐ Carbon-		
☐ Radium-228	☐ lodine-1:		
Radon-222	☐ Strontium	- company	
Other (Specify);	Nickel-63		
CHAIN OF CUSTODY		4 101-99	
1. ^ <u></u>			0 1 .~
Date Nan	ne (Print)		Date
Time Custody Received Orga	anization	KAR	·=0930_
	A SECTION	Signature	Time Custboy Released
Date Nam	ne (Print)		Date
Time Custody Received Orga	anization	Signature	- <u> </u>
8-2-12-	_\\/\/	Milatore	Time Custody Released
	e (Print)	19 000	Date
Time Custody Received Orga	anization DWKLB	Sulbro VI als	
<u> </u>		Signature Supplies Signature	Time Custody Released
ABORATORY REMARKS (Leav L. Condition at Time of Receipt:	re Blank) 📿 🦼	101 Nolib	
Q Acceptable	☐ Broken Container	D Leaked in Transit	
O Holding Time Exceeded	☐ Sample Not Cooled		Improper Container
Holding Time Exceeded Preservatives/Carriers:			improper Container



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0259

Collector:

Dee Anderson

RHB

CA

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon Eureka

95503

CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento

Phone Number: 707 4440746

CA Phone Number: 916-440-7955

95814-5006

Site/Project Name: Humboldt Bay NPP / July 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 7/12/2012

Parameter Method Result +/- CE MDA 95 Units Lab No: 12-0259-01 Sample ID: R 92129 Time Collected: 7/11/2012 10:30 Sampling Point: Effluent Canal Sample Type: Seawater K-40 EPA 901.1 333 +/- 17.3 59.3 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

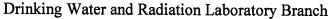
Lab 803 (11/07)

REQUES I FOR SAMPLE	ANAL 1919 (Radiocrieffical)
Sanitation and Radiation Laboratories Branch	Date Received Lab No. (Leave Blank)
850 Marina Bay Parkway, G164 Richmond, CA 94804	112/12 12-0259
1510-620-2911	Date & Time Sampled Serial Number
	7-11-12 / 10:30 R 92129
Collector Information	Reporting Information
Name: Dee Anderson	Name: Steve Hsu Dept/Branch:
Dept./Branch: UEE ANGERSON Address: HBPP/PG:E	Address: RHB
Telephone No.: 307 - 444 * 0746	Relephone No.;
Sample Information	Billing Agency
System Name / Facility: LABPP Sampling Point (s):	D DWFOB() DXRHB D RWQCB() DTSC DDFG DWTPB D FDB D DWR D CDFG
System No. Effluent Canal	EMB Other (Specify)
System No.:	
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater	☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP)	
Treated (circle one): Chlorinated / Chloraminated / Chlorine Dic	oxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater
Finishing:	D Milk
Starting:	☐ Wipes ☐ Biota (Type):
Net (M³)	Radon Canister Other:
☐ Air Charcoal Cartridge	Tradon danisti
a 7111 Ortaloga Gartingo	
COMMENTS: (Cautions, etc.): 2012 - 5174	
☐ Field Treatment: Preservatives added: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	itced/Frozen: Other:
☐ Field Measurement:mR/hr	Radionuclide(s), if known:
☐ Rush/Priority (should be prearranged and have supervisory app	r <mark>d</mark> val)
ANALYSIS REQUESTED (For questions, please call 510-620-2911	
☐ Gross Alpha ☐ Gross Bet	a S⊈Gamma Scan
☐ Total Uranium ☐ Total Beta	
☐ Total Radium ☐ Tritium (³H	
☐ Radium-226 ☐ Carbon-14	
☐ Radium-228 ☐ lodine-13	The Second Control of the Control of
☐ Radon-222 ☐ Strontium	
Other (Specify); Nickel-63	
CHAIN OF CUSTODY	
1 . 1. 1. 1. 1. 1. 1. 1.	$\frac{1}{1}$
Date Name (Print)	Date
Time Custody, Received Organization	Signature Tane Custody Released
2.	
Date Name (Print)	Date
Time Custody Received Organization	Signature Time Custody Released
3. 7-12-12 VA	
Date Name (Print)	Date Date
Time Custody Received Organization	Signature Time Custody Released
LABORATORY REMARKS (Leave Blank) / 0.6/	
A. Condition at Time of Receipt:	MR/HR
O Acceptable O Broken Container	☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled	Insufficient Sample
B. Preservatives/Carriers:	□ Not Added □ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0260

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon Eureka

95503 CA

CDPH - RHB, 1500 Capitol Av., MS 7610

CA 95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / July 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 7/12/2012

Parameter Method Result +/- CE **MDA** 95 Units Lab No: 12-0260-01 Sample ID: R 92136 Time Collected: 7/11/2012 10:30 Sampling Point: Effluent Canal Sample Type: Seawater **Tritium** EPA 906.0 37.3 +/- 154 262.0 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	AMPLE ANALYSIS (Rad		
Sanitation and Radiation Laboratories Branch	Date Re	ceived	Lab No. (Leave Blank)
350 Marina Bay Parkway, G164	7110	112	12-0260
Richmond, CA 94804 510-620-2911	Date & Time	e Sampled	Serial Number
	7-11-12		R 92136
Collector Information	Reporting Inform	ation	
Name: Deet/Branch: Dee Anderson	Name: Dept./Branch:	stano He	O
5 - F	Address:) RVE	or and the second
FIOUR / COND		RHB	
Telephone No.: 707-444-6746	Telephone No.:		· · · · · · · · · · · · · · · · · · ·
	Billing Agency		
System Name / Facility: HBPP Sampling Point (s):	D DWFOB()	ARHB □ R	
Efficial Canal	DWTPB EMB	☐ FDB ☐ D ☐ Other (Speci	
System No.:		- Car Other (Opeci	· //
YPE OF SAMPLE (Check all applicable boxes)			
☐ Drinking Water ☐ Groundwater	Surface Water		l Wastewater
Raw Water Treatment Plant	(WTP) Distribution Sys		Point of Use (POU)
Treated (circle one): Chlorinated / Chloraminated / Chlorinated / Chlori	rine Dioxide / Ozonated / Po	eroxizone / Fluorid	ated / Coagulated / pH Adjusted
Air Filters Date/Time	Seawater		Sludge (Semi-solid Samples)
Finishing:	Milk		Soil/Sediment
Starting:	☐ Wipes		Biota (Type):
Net (M³)	⊬ □ Radon Caniste	f L	Other:
Air Charcoal Cartridge			
COMMENTS: (Cautions, etc.):			
Field Treatment: Preservatives added:	/ced/Frozen:	Oth	er:
Field Measurement: mR/hr			
Rush/Priority (should be prearranged and have supervise	No.		
ANALYSIS REQUESTED (For questions, please call 510-62	- Alexander -		
	oss Beta	☐ Gamma Sc	an .
	tal Beta (LSC)	☐ NORM (Gai	
	tium (³ H)	and the second s	ericium / Curium
	rbon-14	☐ Isotopic Plu	
	line-131 -	☐ Isotopic The	
	ontium-89, 90	☐ Isotopic Ura	
	ckel-63	☐ Iron-55	
	xel-o3	G Hon-oo	
CHAIN OF CUSTODY			7-11-12
Date Name (Pfint)		1/1/	Date
	- 10/0	ul	13:30
Time Custody Received Organization	Signature		Time Custody Released
Date Name (Print)	J. Y. \		Date
n, which the state of the state			
Time Custody Received Organization	Signature		Time Custody Released
Date Name (Print)	_ /9_		Date
13:35 DIN RIG	5 / Vu	LouaM. OR	<u> </u>
Time Custody Received Organization	Signature	77	Time Custody Released
ABORATORY REMARKS (Leave Blank)			
A. Condition at Time of Receipt:	MR/HR		D Improper Container 12
☐ Acceptable ☐ Broken Container ☐ Holding Time Exceeded ☐ Sample Not Cooled	Leaked in Tran		□ Improper Container / ∠
I. Preservatives/Carriers:) //_ D Net Added		D Not Applied by



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0199

Collector:

Dee Anderson

RHB

95503

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CDPH - RHB, 1500 Capitol Av., MS 7610 95814-5006

Eureka CA Sacramento

CA Phone Number: 916-440-7955

Phone Number: 707 4440746

Site/Project Name: Humboldt Bay NPP / June 2012

System No:

Billing Agency: RHB

Samples Received by Lab: 6/14/2012

Parameter Method Result +/- CE Units MDA 95 Lab No: 12-0199-01 R 92013 Time Collected: 6/13/2012 08:25 Sampling Point: Effluent Canal Sample ID: Sample Type: Seawater K-40 EPA 901.1 364 +/- 18.1 61.3 pCi/L

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUEST FOR SAMPL	EANALYSIS (Radiochemical)	
Sanitation and Radiation		Date Received	Lab No. (Leave Blank)
850 Marina Bay Parkway,	G164	6/14/12	12-0199
Richmond, CA 94804 510-620-2911		Date & Time Sampled	Serial Number
510-020-2911		6-13-12 /0825	N R 92013
Collector Information		Reporting Information	
Name: Dee 1	Anderson	Name: STEVE HS	u The second
Dept./Branch:	1PGEE	Dept./Branch: RHB Address:	
Address:		Aduless.	
Telephone No.:	אורם -444 (רסד	Telephone No.:	
Sample Information		Billing Agency	
System Name / Facility:	HBPP Effluent Canal		RWQCB() DTSC
Sampling Point (s):	Ltt west	D DWTPB D FDB D Other (S	DWR CDFG
System No.:		a clap a other (a	pecity)
TYPE OF SAMPLE (Check	(all applicable boxes)		
☐ Drinking Water	☐ Groundwater	☐ Surface Water	☐ Wastewater
Raw	☐ Water Treatment Plant (WTP) 🚨 Distribution System	☐ Point of Use (POU)
☐ Treated (circle one): C	hlorinated / Chloraminated / Chlorine Di	oxide / Ozonated / Peroxizone / Fl	uoridated / Coagulated / pH Adjusted
Air Filters	Date/Time	Seawater	☐ Sludge (Semi-solid Samples)
Finishing:		Milk	☐ Soil/Sediment
· · · · · · · · · · · · · · · · · · ·	The second secon	Wipes	☐ Biota (Type):
Starting:		Radon Canister	Other:
Net (M³)	이 얼마나 다.	Radon Carilster	d Other.
Air Charcoal Cartridge			
COMMENTS: (Cautions, e	etc.):		
☐ Field Treatment: Pre-	servatives added:	red/Frozen:	Other:
Field Measurement:	mR/hr	Radionuclide(s), if known:	
☐ Rush/Priority (should be	prearranged and have supervisory app	proval)	
ANALYSIS PEOLIESTED	(For questions, please call 510-620-291	1)	
		* ***	
Gross Alpha	☐ Gross Be		
☐ Total Uranium	☐ Tritium (³	Section 2	(Gamma) c Americium / Curium
Total Radium	☐ Carbon-1		c Plutonium
Radium-226	☐ lodine-13	766	
Radium-228	□ Todine-13		
Radon-222	Q Nickel-63	The state of the s	
Other (Specify);	U Nickei-os	☐ Iron-55	
CHAIN OF CUSTODY 1.			
Date	Name (Print)		 Date
= 0.116		for fuell	1325
Time Custody Received 2.	Organization Organ	Signature	Time Custody Released
Date	Name (Print)		Date
Time Out 4 Division			
Time Custody Received 3.	Organization	Signature	Time Custody Released
3. Date	Name (Phili) Form	1 10 11 D	Date
Time Custody Received	Organization DIAPLE	Signature # # T	T-00-4-51-4-
rime Custody Received	Organization	Signature V V	Time Custody Released
LABORATORY REMARKS		des.	
 A. Condition at Time of Re Q. Acceptable 	celpt: 1 Broken Container	D Leaked in Transit	☐ Improper Container
☐ Holding Time Excee		O Leaked in Transit O Insufficient Sample	G improper Container
B. Preservatives/Carriers:			
Added While Sampli	ng U Added in Laboratory	☐ Not Added	□ Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0200

Collector:

Dee Anderson

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

Eureka

95503

Sacramento

95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / June 2012 System No:

Billing Agency: RHB

Samples Received by Lab: 6/14/2012

Parameter

Method

Result +/- CE

MDA₉₅

Units

Lab No: 12-0200-01

Sampling Point: Effluent Canal

Sample ID: Sample Type: Seawater

Time Collected: 6/13/2012 08:25

Tritium

EPA 906.0

R 92005

-97.6 +/- 154

267

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

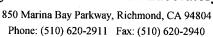
⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMI	PLEANALYSIS (Radiochemical)
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164	Date Received Lab No. (Leave Blank)
Richmond, CA 94804	6/14/12 12-200
510-620-2911	Date & Time Sampled Serial Number R 92005
Collector Information	Reporting Information
Name: Dee Anderson Dept/Branch: HBPP PG 4E Address:	Name: STEVE HSU Dept/Branch: RHB Address:
Telephone No. (707) 444-0746	Felephorie No.:
Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Coma	Billing Agency DWFOB() RHB RWQCB() DTSC DWTPB FDB DWR CDFG
System No.: 707 444-0746 AE3	
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater ☐ Water Treatment Plant (W	Surface Water TP) Distribution System Wastewater Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine	Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater Sludge (Semi-solid Samples)
Finishing:	☐ Milk ☐ Soil/Sediment
Starting:	☐ Wipes ☐ Biota (Type):
Net (M ³)	Radon Canister
☐ Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): 2012 ~ 449	24
☐ Field Treatment: Preservatives added:	/ Jed/Frozen: Other:
☐ Field Measurement:mR/hr	Radionuclide(s), if known:
Rush/Priority (should be prearranged and have supervisory	
ANALYSIS REQUESTED (For questions, please call 510-620-2	2911) \$
☐ Gross Alpha ☐ Gross	Beta Gamma Scan
	Beta (LSC)
☐ Total Radium ☐ Tritium	
☐ Radium-226 ☐ Carbo	n-14
☐ Radium-228 ☐ Iodine	-131 Isotopic Thorium,
☐ Radon-222 ☐ Stront	lum ₇ 89, 90]
Other (Specify); ///// D Nickel	-63, 1 B □ Iron-55
CHAIN OF CUSTODY 15/5	
1. Date Name (Print)	Date
Time Sustody Received Organization	Signature Time Custody Released
2.	
Date Name (Print)	Date
Time Custody Received Organization 3/\(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(1	Signature Time Custody Released
Date Name (Print)	Date
Time Custody Received Organization	Signature Time Custody Released
LABORATORY REMARKS (Čeave Blank)	
A. Condition at Time of Receipt: Condition at Time of Receipt: Condition at Time of Recei	☐ Leaked in Fransit ☐ Improper Container ☐ Insufficient Sample
B. Preservatives/Carriers:	
D. Added While Compline C. Added is Laborate	



Drinking Water and Radiation Laboratory Branch





FINAL Analysis Results Report for Task ID. 12-0096

Collector:

Dee Anderson

RHB

Requestor: Steve Hsu

RHB

HBPP 1000 King Salmon CA

1500 Capitol Avenue, MS 7610

Eureka Phone Number: 707 4440746

95503

Sacramento

CA

Phone Number: 916-440-7940

Site/Project Name: HBNPP / May 2012 System No:

Billing Agency: RHB

Samples Received by Lab: 5/3/2012

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 12-0096-01

Sample ID:

R 91956 Sample Type: Seawater Time Collected: 5/2/2012

07:50

Sampling Point: Canal Effluent

K-40

EPA 901.1

346 +/- 17.7

60.1

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Sanitation and Radiation Laboratories Branch 350 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date & Time	19/5-3/12	Lab No. (Leave Blank) 12-0096
Richmond, CA 94804			12-0096
	Date & Time	Sampled	
		Jampieu	Serial Number
	5-2-12 /0	>750	R 91956
Collector Information	Reporting Informa	ition	
Name: Dee Anderson	Name:	Steve Hs	U
Dept./Branch: HBPP Address: DC:/	Dept./Branch: Address:	RHB	
(0;E			***
Telephone No.: 707 444-6746	Jelephone No.:		
Sample Information System Name / Eacility: HBPP	Billing Agency	—	
System Name / Facility: Ffluent Canal	D DWFOB() D DWTPB	TRHB RW	QCB() DTSC R DCDFG
Ett (con cona)	D EMB	Other (Specify)	
System No.:		— отн., (оросну,	
YPE OF SAMPLE (Check all applicable boxes)		in the second	
Drinking Water Groundwater	Surface Water	<u> </u>	Wastewater
☐ Drinking Water ☐ Groundwater ☐ Water Treatment Plant (V	WTP) 🚨 Distribution Syst	em 🔾 🗎	Point of Use (POU)
Treated (circle one): Chlorinated / Chloraminated / Chlorin	e Dioxide / Ozonated / Pe	roxizone / Fluoridat	ed / Coagulated / pH Adjuste
Air Filters Date/Time	Seawater	D :	Sludge (Semi-solid Samples
Finishing:	☐ Milk		Soil/Sediment
Starting:	☐ Wipes		Biota (Type):
Net (M³)	Radon Canister		
Air Charcoal Cartridge	Nauon Camster	· ·	Other:
1 All Charcoal Caldinge			
COMMENTS: (Cautions, etc.): 202-3116			to the control of the second of the control of the
Field Treatment: Preservatives added: HUO3	ced/Frozen:	Other	
Field Measurement:mR/hr	23 P. L	, if known:	
Rush/Priority (should be prearranged and have supervisory			
NALYSIS REQUESTED (For questions, please call 510-620-	-2911)		
☐ Gross Alpha	, i	Ş ∕ Gamma Scan	
	l Beta (LSC)	NORM (Gamm	na)
Total Radium		☐ Isotopic Amer	
Radium-226		☐ Isotopic Plutor	
그 그 그 이 아이는 그는 그는 것이 하는 것이 없는 것이 모든 사람들은 회원하는 것이 되었다. 그 그 없는 그 없는 것이다.	e-131 .	☐ Isotopic Thoris	
	ntium-89, 90	☐ Isotopic Urani	
Other (Specify);		☐ Iron-55	
HAIN OF CUSTODY			
		Λο	5-2-12
Date Name (Print)		<i>(X)</i>	Date
Time Custody Received Organization	Signature Signature	<i>-</i>	Time Custody Released
Date Name (Print)	The second secon		Date
Time Custody Received Organization	Signature		Time Custody Released
Date VIA Name (Print)	- Har tripo j		Date
11.00 DWRLB		ores M. Oli.	
Time Custody Received Organization	Signature		Time Custody Released
	and the second second second second		are k ey a garak ang akang sa pangsasan a
ABORATORY REMARKS (Leave Blank)	Alex Malia		
Condition at Time of Receipt:			
Condition at Time of Receipt:	□ Leaked in Trans		☐ - Improper Container
Condition at Time of Receipt:			☐ - Improper Container

☐ Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0097

Collector:

Dee Anderson

Eureka

RHB

Requestor: Roger Lupo

RHB

HBPP 1000 King Salmon

95503

CDPH - RHB, 1500 Capitol Av., MS 7610

95814-5006

Phone Number: 707 4440746

Sacramento

CA

Phone Number: 916-440-7955

Site/Project Name: Humboldt Bay NPP / May 2012

Samples Received by Lab: 5/3/2012

System No:

Parameter

Billing Agency: RHB

Units

Lab No: 12-0097-01

Method

R 91949

Result +/- CE

MDA 95

Sample Type: Seawater

Sample ID:

Time Collected: 5/2/2012

07:50

Sampling Point: Canal Effluent

Tritium

EPA 906.0

-29.2 +/- 155

267

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Sanitation and Radiation Laboratories Branch	TON SAMI ELANAL	YSIS (Radiochemical)	Lab No. (Leave Blank)
850 Marina Bay Parkway, G164		5-3-17	12-0097
Richmond, CA 94804		Date & Time Sampled	Serial Number
10-620-2911	5.	2-12 / 6756	R 91949
Collector Information		ting Information	
ame: Dee Anderson	Name		145U
rept./Branch: 42.70		Diancii.	
ddress:	Madie		13
elephone No.: \$707 444-574	€ felepi	none No.:	
comple information	Billing	g Agency	
System Name / Facility: HBPP	DV	VFOB(), DXRHB D	RWQCB() DTSC DWR DCDFG
	, H		
System No.: £91 (beat Ca	val PEN	, (-p-	
YPE OF SAMPLE (Check all applicable boxes)			
Drinking Water Groundwater	Sui	face Water	Wastewater
Raw Water Treatm Treated (circle one): Chlorinated / Chloraminate	ent Plant (WTP) Dis		☐ Point/of Use (POU)
1 Treated (Circle Offe): Chlorinated / Chloraminate			idated / Coagulated / pri Adjusted
Air Filters Date/Ti	me Ş KSea	awater	☐ Sludge (Semi-solid Samples)
Finishing:	Q Mill		☐ Soil/Sediment
Starting:	🚇 Wij	oes	☐ Biota (Type):
Net (M³)	D Rac	don Canister	Other:
Àir Charcoal Cartridge			
OMMENTS: (Cautions, etc.): 2013-311			
Field Treatment: Preservatives added:		rozen: O	ther:
		lionuclide(s), if known:	ulei
Field Measurement: Rush/Priority (should be prearranged and have:		nonuciide(s), ii known.	
- Maria Barata (n. 1 1866) - Araba Barata (n. 1886)			
NALYSIS REQUESTED (For questions, please ca			
Gross Alpha	☐ Gross Beta	☐ Gamma S	
Total Uranium	☐ Total Beta (LSC)	☐ NORM (G	
Total Radium	Tritium (³ H)	the contract of the contract o	mericium / Curium
1	Carbon-14	☐ Isotopic P	
Radium-228	lodine-131	☐ Isotopic TI	
Radon-222	Strontium-89, 90	☐ Isotopic U	ranium
Other (Specify);	☐ Nickel-63	☐ Iron-55	
HAIN OF CUSTODY			
Date Name (Print)			<u>5-2-17</u> Date
	· #	Daviell	1000
Time Custody Received Organization	A Supplement		Tane Custody Released
Date Name (Print)) Date
Time Custody Received Organization	* Signat	lura -	Time Custod: Dataset
53-12	эіулат		Time Custody Released
Date Name (Print)	.0 .0	10	Date
Time Custody Received Organization	Signat	Tulbria MA	Time Custody Released
	Signal	- N	Time Custody Released
ABORATORY REMARKS (Leave Blank)	O.O.L MR HR		
Condition at Time of Receipt: Description Broken Co		eaked in Transit	□ Improper Container
☐ Holding Time Exceeded ☐ ☐ Sample N		sufficient Sample	
Preservatives/Carriers:			
☐ Added While Sampling ☐ Added in I	aboratory Fig. N	of Added	☐ Not Applicable -



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0012

Investigator: Dee Anderson

RHB

Requestor: Steve Hsu

RHB

HBPP 1000 King Salmon

1500 Capitol Avenue, MS 7610

95503

Sacramento

CA 95814-5006

Phone Number: 707 4440746

Phone Number: 916-440-7940

Site/Project Name: Humboldt Bay / April 2012

CA

Samples Received by Lab: 4/5/2012

System No:

Parameter

Billing Agency: RHB

MDA 95

Units

Method

Result +/- CE

Lab No: 12-0012-01

Sample Type: Seawater

Sample ID:

R 91941 Time Collected: 4/4/2012 08:30

Sampling Point: Effluent Canal

K-40

EPA 901.1

254 +/- 19.2

75.5

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Not Applicable

California Department of Public Health State of California - Health and Welfare Agency REQUEST FOR SAMPLE ANALYSIS (Radio hemical) Lab No. (Leave Blank) Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 - 0012 Richmond, CA 94804 Serial Number Date & Time Sampled 510-620-2911 Reporting Information **Collector Information** Name: STEVE HSU Name: Dee Anderson Dept./Branch: RHB Dept./Branch: HB:PP Address: Address: Telephone No.: Telephone No.: 707-444-0746 Billing Agency Sample Information System Name / Facility: HBPP
Sampling Point (s): Effluent Canal RHB ☐ DTSC DWFOB() ☐ RWQCB() D DWTPB ☐ FDB O DWR CDFG ☐ EMB ☐ Other (Specify) System No.: TYPE OF SAMPLE (Check all applicable boxes) Groundwater Surface Water Wastewater Drinking Water Point of Use (POU) ☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System Treated (circle one): Chlorinated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted ☐ Sludge (Semi-solid Samples) ☐ Air Filters Date/Time Seawater Milk ☐ Soil/Sediment Finishing: Wipes ☐ Biota (Type): Starting: Radon Canister Other: Net (M³) □ Air Charcoal Cartridge COMMENTS: (Cautions, etc.): ☐ Field Treatment: Preservatives added: iced/Frozen: Other: Radionuclide(s), if known: ☐ Field Measurement: mR/hr Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) ☐ Gross Beta (X) Gamma Scan Gross Alpha ☐ NORM (Gamma) ☐ Total Beta (LSC) ☐ Total Uranium ☐ Total Radium ☐ Tritium (3H) ☐ Isotopic Americium / Curium ☐ Carbon-14 ☐ Isotopic Plutonium ☐ Radium-226 ☐ Radium-228 ☐ lodine-131 ☐ Isotopic Thorium ☐ Isotopic Uranium ☐ Radon-222 ☐ Strontium-89, 90 ☐ Nickel-63 ☐ Iron-55 Other (Specify); CHAIN OF CUSTODY 1. Name (Print) Date Time Custody Released Time Custody Received Organization 2. Name (Print) Date Time Custody Released Time Custody Received Organization Signature 3. Name (Print) Date Time Custody Received Time Custody Released Organization Signature LABORATORY REMARKS (Leave Blank) **Condition at Time of Receipt:** Acceptable **Broken Container** eaked in Transit Improper Container **Holding Time Exceeded** a Sample Not Cooled Insufficient Sample

Preservatives/Carriers: Added While Sampling

Added in Laboratory

Not Added



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0013

Collector:

Dee Anderson

RHB

Requestor: Steve Hsu

RHB

HBPP 1000 King Salmon

95503

1500 Capitol Avenue, MS 7610

Eureka

CA

EPA 906.0

Sacramento

95814-5006 CA

Phone Number: 707 4440746

Phone Number: 916-440-7940

Site/Project Name: Humboldt Bay NPP / April 2012

System No:

Tritium

Billing Agency: RHB

Samples Received by Lab: 4/5/2012

284.0

pCi/L

Parameter Result +/- CE MDA 95 Units Method Time Collected: 4/4/2012 08:30 Sampling Point: Efluent Canal Lab No: 12-0013-01 Sample ID: R 91927 Sample Type: Seawater

-278.0 +/- 159.0

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR	SAMPLE ANALYSIS (F	Radiochemical)	
Sanitation and Radiation Laboratories Branch	. Date	Received	Lab No. (Leave Blank)
850 Marina Bay Parkway, G164 Richmond, CA 94804	-11' - U-'	5-12	12-0012
510-620-2911	Date &	rime Sampled	Serial Number
	4-4-12	10830	R 91927
Collector Information	Reporting Info		
Name: Dee Anderson	Name:	Steve Hsu	
Dept./Branch: HB PP	Dept./Branch:	RHB	
Address: 1000 King Salmon Eureka, CA 95503	Address:		
Telephone No. 707 - 444-0746	Telephone No.	*,	
Sample Information	Billing Agency		
System Name / Facility: HBPP	DWFOB (RWQCB() DTSC
Sampling Point (s): Effluent Canal	DWTPB	Ú FDB □ □	WR 🔲 CDFG
System No.:	D EMB	☐ Other (Spec	ify)
TYPE OF SAMPLE (Check all applicable boxes)			
☐ Drinking Water ☐ Groundwater	Surface Wa	and the second second	
☐ Raw ☐ Water Treatment Plan	nt (WTP) Distribution		Wastewater Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chl			lated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater		
Finishing:	/87		Sludge (Semi-solid Samples)
	Milk	<u> </u>	Soil/Sediment
Starting:	☐ Wipes	-	Biota (Type):
Net (M ³)	Radon Canis	ster 🗆	Other:
Air Charcoal Cartridge			
COMMENTS: (Cautions, etc.): 2012-3259			
Field Treatment: Preservatives added:		MO FEETEN CONTRACTOR	er:
☐ Field Measurement: mR/hr			S
		e(s), if known: 💆	War and the second of the seco
Rush/Priority (should be prearranged and have supervised		P	
ANALYSIS REQUESTED (For questions, please call 510-6	620-2911)		
☐ Gross Alpha	ross Beta	Gamma Sc	an in the second of the second
☐ Total Uranium	otal Beta (LSC)	☐ NORM (Gar	nma)
☐ Total Radium ♀ Ti	ritium (³ H) 🌡	☐ Isotopic Am	ericium / Curium
Radium-226 C	arbon-14	☐ Isotopic Plu	and the second s
Radium-228 🔲 lo	dine-131 📥	☐ Isotopic The	
Redon-222 □ S	trontium-89_90	☐ Isotopic Ura	
Other (Specify);	ckel-63	☐ Iron-55	
CHAIN OF CUSTODY			
			4-4-12
Date Name (Print)	1 / /	1	<u> </u>
Time Custody, Received Organization	Signature	mulf	Time Custody Released
		Section 4	Time Cospay Released
Date Name (Print)	The second second	A	Date
Time Custody Received Organization	Şignatüre		Time Custody Released
- KU-5-10			
Date Name (Print)	19	7 711 1	Date
Time Custody Received Organization	Signature	lowa W. Cl	Time Custody Released
	A.		Thire Custody (Celeased
ABORATORY REMARKS (Leave Blank)	- O.O. MR/H	K .	
Acceptable	Leaked in Tr		☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled	Insufficient S		- Participal Sales of the Control of
Preservatives/Carriers:			
Added While Sampling D Added in Laborator	Not Added		□ Not Applicable



State of California - Health and Human Services Agency California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. N12-0179

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/15/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: D. Anderson Site Name: Humboldt Bav NPP

Date/Time Collected: 03/07/2012 08:05 Date/Time Received: 03/08/2012 13:40

Source Name: HBNPP / March 2012

R Number: R 92789

Sample Type: Seawater

Sample ID **Sampling Point** Method **Parameter** Result ± CE MDA95 Units N12-0179-001 Canal Effluent EPA 901.1 K-40 290 ± 20.1 78.2 pCi/L

^{1.} Precision criteria for these methods were determined to be acceptable.

^{2.} CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

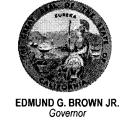
Sanitation and Radiation Laboratories Branch 850 Marins Bay Parkway, G164 Richmond, CA 94804 Reporting Information Name: Dept.Branch: Dept.Branch: Address: File Parkway Parkway, G164 Reporting Information Name: Dept.Branch: Address: File Parkway Parkway, G164 Reporting Information Name: Dept.Branch: Reporting Information System No.: File Parkway Parkway Reporting Information System No.: System No.: File Parkway Parkway Reporting Information System No.: System No.: Private Circle Constitution Radion Parkway Reporting Information System No.: Private Parkway Reporting Information R
Richmond, CA 94804 Date & Time Sampled Serial Number S
Dete & Time Sample Serial Number Serial
Collector Information Name: Dept/Branch: STEVE HSU Address: Dept/Branch: Dept/Branch: STEVE HSU Address: Dept/Branch: Dept
Collector Information Reporting Information Repo
Name: Dept./Branch: Dept./Branch: Dept./Branch: Dept./Branch: Dept./Branch: Address: RHP
Telephone No.: 707-444 3640 Telephone No.: Sample Information System Name / Facility 136 f DWFOB () RHB RWQCB () DTSC DWFOB () DWFOB () DWFOB () DWFOB () DWFOD () DWFOB () DWFOD
Telephone No.: 707-444 3640 Telephone No.: Sample Information System Name / Facility 136 f DWFOB () RHB RWQCB () DTSC DWFOB () DWFOB () DWFOB () DWFOB () DWFOD () DWFOB () DWFOD
Telephone No.: 707-4U4 2640 Telephone No.: Sample Information System Name / Facility. 138 f DWFOB () DWFOB
Sample Information System Name / Facility: 136 DWFOB () RHB RWQCB () DTSC DWFOB () RHB DWR CDFG DWTPB DWFDB DWR CDFG DWTPB DWR CDFG DWR CDFG DWR CDFG DWTPB DWR CDFG DWR C
System Name / Facility:
System No.: EMULIUNT CANAL BAMP CDFG System No.: EMULIUNT CANAL BAMP CDFG System No.: EMULIUNT CANAL BAMP CDFG EMB Other (Specify) TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Water Groundwater Water Treatment Plant (WTP) Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted Air Filters Date/Time Seawater Sludge (Semi-solid Samples) Finishing: Milk Soli/Sediment Starting: Wipes Biota (Type): Net (M*) Radion Canister Other: MR/nr Radion Canister Other: MR/nr Radionuclide(s), if known: Radionuclide(s), if kn
System No.: FULLIANT CANAL GEMB Other (Specify) TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Groundwater G
TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Groundwater Groundwater Groundwater Point of Use (POU)
Groundwater Groundwater Water Treatment Plant (WTP) Surface Water Point of Use (POU)
Raw
Treated (circle one): Chlorinated / Chlorine Dioxide / Ozonated / PH Adjusted / PH Adjusted Air Filters Date/Time Seawater Sludge (Semi-solid Samples)
Air Filters Date/Time Seawater Sludge (Semi-solid Samples)
Finishing:
Starting: Wipes Biota (Type): Net (M³) Radon Canister Other:
Starting: Net (M³) Radon Canister Other:
Net (M³)
□ Air Charcoal Cartridge COMMENTS: (Cautions, etc.):
COMMENTS: (Cautions, etc.):
Field Treatment: Preservatives added:
Field Measurement:
Field Measurement:
Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta NoRM (Gamma) NoRM (Gamma) I total Uranium Radium-226 Radium-226 Radium-228 Radium-228 Radon-222 Strontium-89, 90 I sotopic Plutonium Radon-222 Strontium-89, 90 I sotopic Uranium Nickel-63 CHAIN OF CUSTODY Name (Print) Time Custody Received Name (Print) Time Custody Received Organization Signature Time Custody Received Time Custody Received Organization Signature Time Custody Received
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta Total Uranium Gross Beta Total Radium Gross Beta Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Radium-226 Carbon-14 Isotopic Plutonium Isotopic Thorium Isotopic Thorium Isotopic Uranium Isoto
Gross Alpha Gross Beta Gross Beta NORM (Gamma) Total Vanium Gross Beta Gross Beta Norm (Gamma) Norm (Gamma) Stotopic Americium / Curium Stotopic Plutonium Stotopic Plutonium Stotopic Thorium Stotopic Uranium Nickel-63 Norm (Specify); Nickel-63 Norm (Specify); Strontium-89, 90 Nickel-63 Norm (Specify); Nickel-63 Norm (Specify); Nickel-63 Norm (Print)
□ Total Uranium □ Total Beta (LSC) □ NORM (Gamma) □ Isotopic Americium / Curium □ Radium-226 □ Carbon-14 □ Isotopic Plutonium □ Radium-228 □ Isotopic Thorium □ Radon-222 □ Strontium-89, 90 □ Isotopic Uranium □ Other (Specify); □ Nickel-63 □ Iron-55 CHAIN OF CUSTODY 1. □ Date □ Name (Print) □ Date □ Date □ Name (Print) □ Date □
Total Radium Tritium (³H) Radium-226 Carbon-14 Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Thorium Isotopic Thorium Isotopic Thorium Isotopic Uranium Isotopic Uranium Isotopic Thorium Is
□ Radium-226 □ Radium-228 □ Isotopic Plutonium □ I
□ Radium-228 □ Iodine-131 □ Isotopic Thorium □ Radon-222 □ Strontium-89, 90 □ Isotopic Uranium □ Other (Specify); □ Nickel-63 □ Iron-55 CHAIN OF CUSTODY 1. □ Date □ Name (Print) □ Date □ Granization □ Name (Print) □ Date □ D
Radon-222 Other (Specify); Nickel-63 Iron-55 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Time Custody Received Organization Signature Signature Time Custody Received Organization Time Custody Received Organization Time Custody Received
Other (Specify);
CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization Date Name (Print) Time Custody Received Organization Time Custody Received Organization Signature Time Custody Received Organization Signature Time Custody Received Organization
1. Date Name (Print) Time Custody Received Organization Signature Date Name (Print) Time Custody Received Organization Time Custody Received Organization Signature Time Custody Received Organization Signature Time Custody Received Organization
Date Name (Print) Time Custody Received Organization Signature Time Custody Received Organization
Time Custody Received Organization Signature Time Custody Received Organization Time Custody Received Organization Signature Time Custody Received Organization Signature Time Custody Received Organization
2. Date Name (Print) Time Custody Received Organization Signature Time Custody Released
Date Name (Print) Time Custody Received Organization Signature Time Custody Released
Time Custody Received Organization Signature Time Custody Released
3. 2×+10
Date Name (Print)
13:40 DWRIB
Time Custody Received Organization Signature Time Custody Released
ABORATORY REMARKS (Leave Blank)
A. Condition at Time of Receipt:
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container ☐ Holding Time Freeded
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container ☐ Holding Time Exceeded → ☐ Sample Not Cooled ☐ Insufficient Sample 3. Preservatives/Carriers:



State of California - Health and Human Services Agency California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. N12-0180

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: D. Anderson Site Name: Humboldt Bay NPP

Date/Time Collected: 03/07/2012 08:05 Date/Time Received: 03/08/2012 13:40

Source Name: HBNPP / March 2012

R Number: R 92779

Sample Type: Seawater

Sample ID	Sampling Point	<u>Method</u>	<u>Parameter</u>	Result ± CE	MDA95	<u>Units</u>
N12-0180-001	Canal Effluent	EPA 906.0	Tritium	-17.2 ± 144	248	pCi/L

^{1.} Precision criteria for these methods were determined to be acceptable.

^{2.} CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factor

MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical) Lab No. (Leave Blank) Date Received Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Collector Information Name: Dept./Branch: Dept./Branch: Address: Address: dephone No.: Telephone No.: Billing Agency Sample Information System Name / Facility: ☐ RWQCB() DWFOB() ☐ RHB DTSC Sampling Point (s): U DWR **DWTPB** Q FDB ☐ CDFG ☐ Other (Specify) **EMB** System No.: TYPE OF SAMPLE (Check all applicable boxes) Groundwater Surface Water ■ Wastewater Drinking Water Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU) Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted Seawater Date/Time ☐ Sludge (Semi-solid Samples) ☐ Air Filters Finishing: Milk □ Soil/Sediment Wipes ☐ Biota (Type): Starting: Net (M3) Radon Canister Other: □ Air Charcoal Cartridge COMMENTS: (Cautions, etc.): ☐ Field Treatment: Preservatives added: ced/Frozen: Other: mR/hr Radionuclide(s), if known: ☐ Field Measurement: Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta Gamma Scan ☐ Total Beta (LSC) ■ NORM (Gamma) ☐ Total Uranium Tritium (3H) ☐ Isotopic Americium / Curium □ Total Radium ☐ Carbon-14 Isotopic Plutonium ☐ Radium-226 ☐ Radium-228 ☐ lodine-131-** ☐ Isotopic Thorium ☐ Isotopic Uranium ☐ Radon-222 ☐ Strontium-89, 90 ☐ Nickel-63 ☐ Iron-55 Other (Specify); CHAIN OF CUSTODY 1. Name (Print) Date Time Custody Received Organization 2. Name (Print) Organization Time Custody Released Time Custody Received Signature Name (Print) Date Time Custody Received Organization **Gignaturé** Time Custody Released LABORATORY REMARKS (Leave Blank) Condition at Time of Receipt: **Broken Container** Leaked in Transit Acceptable Improper Container Sample Not Cooled **a** . Holding Time Exceeded Insufficient Sample Preservatives/Carriers:

Not Added

Not Applicable

☐ Added While Sampling

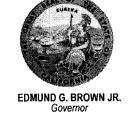
Added in Laboratory



State of California - Health and Human Services Agency California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. N12-0085

Analyst: Angela Tan Analysis Approved By: Shiyamalie Ruberu Analysis Approval Date: 02/23/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 **Phone:** 916-440-7940

Site and Sample Information

Collector's Name: D. Anderson Site Name: Humboldt Bay NPP Date/Time Collected: 02/01/2012 07:40 Date/Time Received: 02/02/2012 10:30

Source Name: HBNPP / February 2012

R Number: R 92720 Sample Type: Seawater

 Sample ID
 Sampling Point
 Method
 Parameter
 Result ± CE
 MDA95
 Units

 N12-0085-001
 Canal Effluent
 EPA 901.1
 K-40
 314 ± 20.4
 77.8
 pCi/L

Precision criteria for these methods were determined to be acceptable.

^{2.} CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

^{3.} MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch	- Date Received Lab No. (Leave Blank)
850 Marina Bay Parkway, G164	DOWN MID MOON
Richmond, CA 94804	0-112 VIE-11103
510-620-2911	Date & Time Sampled Serial Number
	2-1-12 0740 R 92720
Collector Information	Reporting Information
♦ • • • • • • • • • • • • • • • • • • •	Name: STEVE ASU
Dept./Branch:	Dept./Branch:
Dept./Branch: Address: HBPP PGEE	Address: RH3
Telephone No.: 707 - 444-0746	Telephone No.:
Sample Information	Billing Agency
System Name / Facility: 1+3PP	DWFOB() DRHB DRWQCB() DTSC
Sampling Point (s):	DWTPB G FDB DWR D CDFG
EFFLUENT CANAL	EMB Other (Specify)
System No.:	Other (Specify)
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater	Surface Water
☐ Raw ☐ Water Treatment Plant (WTP)	The state of the s
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Diox	ige / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater
Finishing:	Milk Soil/Sediment
Starting:	☐ Wipes ☐ Biota (Type):
Net (M ³)	Radon Canister
☐ Air Charcoal Cartridge/	
COMMENTS: (Cautions, etc.): 2012 - 07	
Field Treatment: Preservatives added: 4003	實際學術 보다 통해 불편하는 경에 되는 아이를 가게 즐겁게 되었다. 이 기를 가장 그렇게 되는 사람들이 되었다. 그 사람들이 나는 사람들이 나는 그를 살아내려면 하는 것이 되었다. 그는 사람들이 되었다.
☐ Field Measurement:mR/hr	Radionuclide(s), if known:
D. Puch/Priority (chould be programmed and have supported and	ALLA
Rush/Priority (should be prearranged and have supervisory appr	oval)
ANALYSIS REQUESTED (For questions, please call 510-620-2911)	
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta	
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Beta	Gamma Scan SC) NORM (Gamma)
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Tritium (³ H	Gamma Scan SC) NORM (Gamma) Isotopic Americium / Curium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Beta	Gamma Scan (LSC) NORM (Gamma) Isotopic Americium / Curium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Tritium (³ H	Gamma Scan (LSC)
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Diodine-131	Gamma Scan SC) NORM (Gamma) Isotopic Americium / Curium sotopic Plutonium Isotopic Thorium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Diodine-131	Gamma Scan SC) NORM (Gamma) Isotopic Americium / Curium sotopic Plutonium Isotopic Thorium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY Gross Beta Caron-14 Carbon-14 Car	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-0 Other (Specify); Name (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-0 Other (Specify); Nickel-63 CHAIN OF CUSTODY Time Custody Received Name (Print) Time Custody Received Total Beta Carbon-14 Carb	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-0 Other (Specify); Nickel-63 CHAIN OF CUSTODY Time Custody Received Organization 2.	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date GOO Time Custody Released
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-0 Other (Specify); Nickel-63 CHAIN OF CUSTODY Name (Print) Time Custody Received Total Beta Carbon-14 Carbon-1	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 2. Name (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Time Custody Released Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Tritium (³H Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date GOO Time Custody Released
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 3. \(\rightarrow -2^{-1}2^{-1}2^{-1}2^{-1} \) Name (Print) Time Custody Received Organization A Gross Beta (Print) Tritium (3H) Carbon-14 Carb	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Time Custody Released Date Signature Time Custody Released
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 7. Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Signature Time Custody Released Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 7. Name (Print) Name (Print) Name (Print) Name (Print) Name (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Signature Time Custody Released Date Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium-0 Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization A Name (Print) Time Custody Received Organization Organization Organization Organization Organization Organization	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Signature Time Custody Released Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Beta Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Date Name (Print) Time Custody Received Organization Name (Print) Organization	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Signature Time Custody Released Date Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY Time Custody Received Rame (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Signature
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print) Acceptable Broken Container	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY Time Custody Received Rame (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Date Signature
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify); CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization Aname (Print) Time Custody Received Organization Aname (Print) Time Custody Received Organization Aname (Print) Time Custody Received Organization Broken Container Condition at Time of Receipt: Acceptable Holding Time Exceeded Broken Container Sample Not Cooled	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date
ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Strontium- Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print) Alpha Name (Print) Date Name (Print) Time Custody Received Organization Name (Print) Date Name (Print)	Gamma Scan NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date



State of California - Health and Human Services Agency California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. N12-0086

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/09/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 **Phone**: 916-440-7940

Site and Sample Information

Collector's Name: D. Anderson

Date/Time Collected: 02/01/2012 07:40 Date/Time Received: 02/02/2012 10:30

Site Name: Humboldt Bay NPP

Source Name: HBNPP / February 2012

R Number: R 92726

Sample Type: Seawater

Sampling Point

Method

Parameter

Result ± CE

MDA95

Units

Sample ID pCi/L -5.93 ± 153 264 EPA 906.0 Tritium Canal Effluent N12-0086-001

Precision criteria for these methods were determined to be acceptable.

^{2.} CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980 MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

	REQUEST FOR SAMPLE	ANALYSIS (Radiochemical)	
Sanitation and Radiation I		Date Received	Lab No. (Leave Blank)
850 Marina Bay Parkway, G Richmond, CA 94804	/104	2-2-12	1112-0086
510-620-2911		Date & Time Sampled	Serial Number
010-020 2011		2-1-12 0740	R 92726
Collector Information		Reporting Information	
Name: DEE	ANDURSON	Name: STEVE	HSU
Dept./Branch:	PPGE	Dept./Branch: STEUE Address: RHB	
Address: FTZS P		Process.	
Telephone No.: 767	- Wed -0746	elephone No.:	· ·
Sample Information		Billing Agency	
System Name / Facility:	HBPP		RWQCB() DTSC
Sampling Point (s):			DWR CDFG
System No.:	FLUENT LANAL	☐ EMB ☐ Other (Spe	ecity)
TYPE OF SAMPLE (Check	all applicable boxes)		
☐ Drinking Water	☐ Groundwater	Surface Water	☐ Wastewater
☐ Raw	☐ Water Treatment Plant (WTP)	Distribution System	☐ Point of Use (POU)
☐ Treated (circle one): Ch	lorinated / Chloraminated / Chlorine Dic	oxide / Ozonated / Peroxizone / Fluo	ridated / Coagulated / pH Adjusted
☐ Air Filters	Date/Time	Seawater	☐ Sludge (Semi-solid Samples)
	Date/Time	Milk	☐ Soil/Sediment
Finishing:	Caro	2 -1	Biota (Type): N12-
H Starting: (
Net (M ³)		Radon Canister	Other:
☐ Air Charcoal Cartridge		2-3	k12 - R 92
COMMENTS: (Cautions, et	tc.): 2012-07	1 0	
☐ Field Treatment: Pres			Other:
	mR/hr	Radionuclide(s), if known:	<u> </u>
Field Measurement:		40	, and the second secon
	prearranged and have supervisory app		
ANALYSIS REQUESTED (For questions, please call 510-620-291		
☐ Gross Alpha	☐ Gross Be		
☐ Total Uranium	☐ Total Bet	a (LSC)	Gamma)
☐ Total Radium	Tritium (³	H) Isotopic	Americium / Curium
☐ Radium-226	🗖 Carbon-1	4 ///> Isotopic	Plutonium
☐ Radium-228	☐ lodine-13		
☐ Radon-222	☐ Strontium		Uranium
Other (Specify);	□ Nickel-63	☐ Iron-55	
CHAIN OF CUSTODY			
1.			= 2/1/12
Date	Name (Print)	100	Date
Time Custody Received	Organization .	- Bignatura (Time Custody Released
2.			
Date	Name (Print)		Date
Time Custody Received	Organization	Signature	Time Custody Released
3. $\frac{\gamma - 2 - 12}{2}$	U A	and the second s	Date
Date IN 30	Name (Print) DINP/R	19 00 000	Pale 7
Time Custody Received	Organization	Signature Signature	Time Custody Released
TO SAN ASSAULT AND	(Isome Blook)		
LABORATORY REMARKS A. Condition at Time of Re-	r (Leave Diarik) ceipt:		
☐ Acceptable	☐ Broken Container	☐ Leaked in Transit	☐ Improper Container
☐ Holding Time Exceed	ded Sample Not Cooled	☐ Insufficient Sample	3.00
B. Preservatives/Carriers:		D. Not Added	C. Not Applicable



State of California - Health and Human Services Agency California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. N12-0014

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/19/2012

Requestor

Name: D. Anderson

Organization: Radiologic Health Branch

Address: PG and E

City:

State: CA

Zip Code:

Sample Type: Seawater

Phone: 707-444-0851

Site and Sample Information

Collector's Name: D. Anderson

Date/Time Collected: 01/04/2012 10:00 Date/Time Received: 01/06/2012 13:38

Site Name: Humboldt Bay NPP

Source Name: Humboldt Bay NPP / January 2012

R Number: R92601

Sample ID

Sampling Point

Method **Parameter** Result ± CE MDA95 <u>Units</u> N12-0014-001 **Effluent Canal** EPA 901.1 K-40 293 ± 19.8 76.5 pCi/L

^{1.} Precision criteria for these methods were determined to be acceptable.

^{2.} CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980 MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

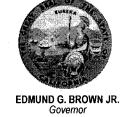
	REQUEST FOR SAMPL			<u>i aktoriji i siloji je ili je</u>
Sanitation and Radiation		Date Re	eceived	Lab No. (Leave Blank)
850 Marina Bay Parkway, Richmond, CA 94804	O 104 (10 10 10 10 10 10 10 10 10 10 10 10 10 1	1 Hartin		NIA sold sat
510-620-2911		1/06/15 Date & Time	e Sampled	N 12 - 00 14 - 001 Serial Number
		1-4-12	10:00	R 92601
Collector Information		Reporting Inform	nation	N 32001
Name: De A A Dept./Branch: HBP	uderson .	Name:	Steve	HSU
Address: HBPL) PGE	Dept./Branch:		
Address.		Address:	RHB	
Telephone No.: 707-	444-0746	Telephone No.:		
Sample Information	A Section 1	Billing Agency		
System Name / Facility:	HBPP	DWFOB()	RHB D F	RWQCB() DTSC
Sampling Point (s):	001	D DWTPB	🛄 FDB 🛄 🛭	OWR 🗀 CDFG
System No.:	Affrent Canal	D EMB	☐ Other (Spec	ify)
TYPE OF SAMPLE (Chec				
☐ Drinking Water	Groundwater			
Raw	Water Treatment Plant (WTP)	Surface Water Distribution Sys	tem [Wastewater Point of Use (POU)
☐ Treated (circle one): C	hlorinated / Chloraminated / Chlorine Dic	xide / Ozonated / Pe	erovizone / Eluoria	dated (Congulated (-11 Adiusted
			FIOAIZONE / FIGUR	dated / Coagulated / pH Adjusted
☐ Air Filters	Date/Time	Seawater Seawater		Sludge (Semi-solid Samples)
Finishing:		Milk		3 Soil/Sediment
Starting:		Wipes		Biota (Type):
Net (M³)		Radon Canister		Other:
☐ Air Charcoal Cartridge		i i		- Other.
				
COMMENTS: (Cautions, e	etc.): 2012-0013	*		3
Field Treatment: Pres	servatives added: HNO3	1ced/Frozen:	Oth	ér:
☐ Field Measurement:	mR/hr	Radionuclide(s)	, if known:	
☐ Rush/Priority (should be	prearranged and have supervisory appr	oval)		
ANALYSIS REQUESTED	For questions, please call 510-620-2911			
☐ Gross Alpha	and the second of the second o	3	.	
☐ Total Uranium	☐ Gross Beta	*	Gamma Sca	
☐ Total Radium	☐ Total Beta	· 14	NORM (Gar	
Radium-226	☐ Tritium (³H	* · · · ·		ericium / Curium
Radium-228	☐ Carbon-14		☐ Isotopic Plu	
Radon-222	☐ lodine-131	- T	☐ Isotopic The	
	☐ Strontium-	89, 90	☐ Isotopic Ura	nium
Other (Specify);	Nickel-63		☐ Iron-55	and Alberta Bayers and Alberta Land
CHAIN OF CUSTODY				
1. Date	Name (Print)			1-4-12
		h2 50	20	Date
Time Custody Received	Organization	Signature		Time Custody Released
Date	Name (Print)			
				Date
Time Custody Received	Organization	Signature	Water to the same of the same	Time Custody Released
Date 01/6/12	Name (Print) A TAN			
-09.11	- DWRIB	Δ Λ	CP .	Date
Time Custody Received	Organization	Signature	law	Time Custody Released
ABORATORY REMARKS				Time Custody Released
L. Condition at Time of Rec	(Ceave Dialik)	-20.01 MR/ 1-		
☐ Acceptable	Broken Container	☐ Leaked in Transi		☐ Improper Container
☐ Holding Time Exceed	ed Sample Not Cooled	☐ Insufficient Samp	ole	- "mproper container - ;
Preservatives/Carriers:				
 Added While Samplin 	g D Added in Laboratory	T) Not Added		



State of California - Health and Human Services Agency California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. N12-0015

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/13/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 **Phone:** 916-440-7940

Site and Sample Information

Collector's Name: D. Anderson

Date/Time Collected: 01/04/2012 10:00 Date/Time Received: 01/06/2012 13:54

Site Name: Humboldt Bav NPP

Source Name: HBNPP / January 2012

R Number: R92589

Sample Type: Seawater

Sample ID	Sampling Point	<u>Method</u>	<u>Parameter</u>	Result ± CE	MDA95	<u>Units</u>
N12-0015-001	Canal Effluent	EPA 906.0	Tritium	200 ± 169	282	pCi/L

^{1.} Precision criteria for these methods were determined to be acceptable.

^{2.} CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

^{3.} MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

	Date Received Lab No. (Leave Blank)
Sanitation and Radiation Laboratories Branch	Date Received Lab No. (Leave Blank)
850 Marina Bay Parkway, G164	106/12 N12-0015-001
Richmond, CA 94804 510-620-2911	Date-Sampled Serial Number
010-020-2311	1-4-12 10:00 R 92589
Collector Information	Reporting Information
	Name: Steve HSU
Name: Dee Anderson Dept./Branch: HBPP ASE	Dept./Branch: RHR
Address:	
Telephone 10.: 767-044-6746	relephone No.:
Sample Information	Billing Agency
System Name / Facility: HBPP	DWFOB() RHB RWQCB() DTSC
Sampling Point (s): Eff went canal	DWTPB DFDB DWR CDFG
System No.:	☐ EMB ☐ Other (Specify)
TYPE OF SAMPLE (Check all applicable boxes)	
	☐ Surface Water ☐ Wastewater
☐ Drinking Water ☐ Groundwater ☐ Water Treatment Plant (WTP	
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Di	oxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	Seawater Sludge (Semi-solid Samples)
Finishing:	Milk
Starting:	Wipes
Net (M ³)	Radon Canister Other:
☐ Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): 2012-013	
☐ Field Treatment: Preservatives added:	ced/Frozen: Other:
☐ Field Measurement:mR/hr	Radionuclide(s), if known:
☐ Rush/Priority (should be prearranged and have supervisory ap	ordval)
ANALYSIS REQUESTED (For questions, please call 510-620-291	
☐ Gross Alpha ☐ Gross Be	
☐ Total Uranium ☐ Total Be	
☐ Total Radium ☐ Tritium (
Radium-226 Carbon-	
Radium-228 Iodine-1:	
□ Radon-222 □ Strontiur	n-89, 90
	, is a morroo
CHAIN OF CUSTODY	
1. Date Name (Print)	Date
	100
Time Curredy Received Organization	Time Custody, eleased
Date Name (Print)	Date
01/6/12	
Time Custody Received Organization	Signature Time Custody Released
Date O/16/12 Name (Print)	1 HOLA TRANSPORTER TRANSPORTER TO THE PARTY OF THE PARTY
09-11E DWPIR	Angola
	Signature Time Custody Released
Time Custody Received Organization	
	sohman .
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	E8.61 MR/W.
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: Broken Container	28 61 MR/W Improper Container
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	28.61 MR/W.
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: D. Acceptable D. Broken Container	28 61 MR/ 10. Leaked in Transit